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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,912	09/22/2003	Ioannis Kouramanis	00100.03.0010	9917

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EXAMINER	
NGUYEN, PHU K	
ART UNIT	**PAPER NUMBER**
2628	

MAIL DATE	DELIVERY MODE
10/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,912	KOURAMANIS ET AL.	
	Examiner	Art Unit	
	Phu K. Nguyen	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Phu Nguyen

PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2300

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over MIZUNO (7,184,604).

As per claim 1, Mizuno teaches the claimed "apparatus for image processing, the apparatus comprising: "a first memory device that receives a video input signal containing an encoded video frame comprising a plurality of portions of encoded video frame data, the first memory device having a storage capacity less than all of the plurality of portions of encoded video frame data for the encoded video frame" (Mizuno, the block readout of input data; column 19, lines 41-58), "the first memory device receiving a first portion of the encoded video frame data" (Mizuno, memory 204a; figure 37); "a graphics processor coupled to the first memory device such that the graphics processor receives the first portion of the encoded video frame data and generates a first graphics portion" (Mizuno, wavelet transform block 202); and "a second memory device receiving the first graphics portion" (Mizuno, memory 204b). It is noted that Mizuno does not teach "a handheld device" which utilizes the block processing algorithm as claimed. However, given Mizuno's process for decoding and displaying an encoded image block-by-block, it would have been obvious that "a handheld device"

utilizes such decoding method for displaying on a screen because the block-by-block process reduces the required memory during the decoding which provides an advantage for small device such as "handheld device" as claimed.

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant's arguments filed July 20, 2007 have been fully considered but they are not deemed to be persuasive. Applicant argues that the memory stores the data set used in the reverse wavelet transformation, not the encoded video which is not correct. Mizuno's figure 37 clearly shows the input data of "wavelet transformed image" and such data will be stored in the memory 204a and processed within the line-based reverse wavelet transform block 202. The decoded image data is then stored in the main memory 204b and later used for display. It is noted that the main memory 204b is used for storing not only the decoded image data but also the set of wavelet decoding data. It is clear that the wavelet encoded data is only a portion of the encoded video frame. Accordingly, the claimed invention as represented in the claims does not represewnt a patentable distinction over the art of record.

Claim 2 adds into claim 1 "an external memory device coupled to the second memory device such that the first graphics portion may be stored therein" which would have been obvious in view of Mizuro's using an external memory to store of the output image in figure 37 (official notice).

Claim 3 adds into claim 2 "the first memory device receives all of the portions of

the encoded video frame data and provides each of the portions of the encoded video frame data to the graphics processor on a portion-by-portion basis" (Mizuro, column 23, lines 30-50).

Claim 4 adds into claim 3 "the graphics processor generates a plurality of graphics portions and provides the plurality of graphics portions to the second memory device on a portion-by-portion basis" (Mizuro, block-by-block basis; figure 37).

Claim 5 adds into claim 4 "the second memory device provides the plurality of graphics portions to the external memory on a portion-by-portion basis" which would have been obvious in view of Mizuro's using an external memory to store of the output image in figure 37 (official notice).

Claim 6 adds into claim 5 "at least one display operably coupled to the external memory such that an output display may be provided from the external memory, wherein the output display includes the plurality of graphics portions" (Mizuro, the example of displayed object in figure 45).

Claim 7 adds into claim 6 "the graphics processor further includes a quantization table for generating the graphics portions having an adjusted data set and wherein the

output display is a thumbnail of the plurality of graphics portions" which would have been obvious compression or down-quantization the image into a thumbnail for representing the image (official notice).

Claim 8 adds into claim 1 "a real time direct memory access device coupled to the first memory device and the second memory device and the graphics processor such that the real time direct memory access device provides for direct access to the first memory device and the second memory device" (Mizuro, the memories 204a-204b; figure 37).

Claim 9 adds into claim 8 "the first memory device is a first portion of an embedded memory device and the second memory device is a second portion of the embedded memory device" which would have been obvious because Mizuro's memories can be a portion within an embedded memory device (official notice).

Claims 10-13, and 15-17 claim a method based on the system of claims 1-6, 8-9; therefore, they are rejected under the same reason.

Claim 14 adds into claim 11 several encoding process which Mizuro teaches in the wavelet encoding (figure 16).

Claim 18 adds into claim 10 "a ring buffer approach" which would have been obvious in view of Mizuro's memories 204a-204b (official notice).

Claims 19-30 are similar to claims 1-6, 8-13, 15-18 but adds JPEG format (Mizuro, column 1, lines 10-13); and the input device such as camera which would have been obvious (official notice); image decoder (Mizuro, figure 37); quantization (obvious for a camera- official notice); or MPEG format (official notice).

Claims 31-38 claim a emthod based on the system of claims 19-30; therefore, they are rejected under the same reason.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phu K. Nguyen
September 27, 2007

PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2300